

REMARKS**Summary of the Office Action**

Claim 15 stands rejected under 35 U.S.C. §102(e) as being anticipated by Lee (US 5,840,606)

Summary of the Response to the Office Action

Applicant has amended claim 15 to better define the invention and to improve grammatical form, and has added new claims 16-18 to further define the invention. Accordingly, claims 15-18 are presently pending in this application.

The Rejection under 35 U.S.C. §102(e)

Claims 15 stands rejected under 35 U.S.C. §102(e) as being anticipated by Lee. To the extent that the Examiner may consider this rejection to apply to amended claim 15, the rejection is traversed as being based upon a reference that neither teaches nor suggests the novel combination of features now clearly recited in amended claim 15. Claim 15 now clearly requires that a top of the first wiring layer is not higher than a top of the first insulating layer. As explained in the specification at page 12, and shown in FIG. 1C, for example, in the Applicant's claimed semiconductor device, upper surfaces of the first metal wire 8a and the second metal wire 8b are formed no higher than an upper surface of the SiO₂ layer 2.

The Office Action relies upon Lee for teaching a first wiring layer 34 on an upper surface of a first insulating layer 30/31, and a nonconductive layer 36. As clearly shown in FIG. 2D of

Lee, a top of the first wiring layer 34 is higher than a top of the first insulating layer 30/31 (emphasis added). Accordingly, Applicant respectfully asserts that the rejection under 35 U.S.C. § 102(e) should be withdrawn because Lee does not teach or suggest each feature of independent claim 15 as amended.

New Claims

Applicant has added new claims 16-18 to further define their invention. Applicant respectfully submits that claims 16-18 are allowable over the prior art of record.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests withdrawal of the rejection, and the timely allowance of pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite the prosecution.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required,

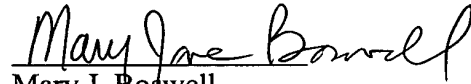
including any required extension of time fees, or credit any overpayment to Deposit Account

No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR
EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By:



Mary J. Boswell

Reg. No. 33,652

Dated: January 24, 2002

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Customer Number 009629

MORGAN, LEWIS & BOCKIUS LLP

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

(202) 739-3000

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 15 has been amended as follows:

15. (Amended) A semiconductor device comprising:

a first wiring layer composed of a plurality of wiring patterns separate from each other embedded and wired on an upper surface of ~~{the}~~ a first insulating layer which covers ~~{the}~~ a surface of ~~{the}~~ a semiconductor substrate;

a nonconductive layer formed by ~~{the}~~ oxidation of material composing the first wiring layer, wherein the nonconductive layer comes into contact with the first wiring layer and covers the first insulating layer, and a top of the first wiring layer is not higher than a top of the first insulating layer.

Claim 16 has been added as follows:

16. (New) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other embedded and wired on an upper surface of the first insulating layer, the first wiring layer including a first material; and

a nonconductive layer formed by oxidation of the first material, the nonconductive layer contacting the first wiring layer and covering the first insulating layer,

wherein a top of the first wiring layer is not higher than a top of the first insulating layer.

Claim 17 has been added as follows:

17. (New) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other embedded and wired on an upper surface of the first insulating layer; and

a nonconductive layer contacting the first wiring layer and covering the first insulating layer, the nonconductive layer includes oxygen ions,

wherein a top of the first wiring layer is not higher than a top of the first insulating layer.

Claim 18 has been added as follows:

18. (New) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other and embedded on an upper surface of the first insulating layer; and

a nonconductive layer that includes oxygen ions contacting the first wiring layer and covering the first insulating layer,

wherein a top of the first wiring layer is not higher than a top of the first insulating layer.



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PATENT
ATTORNEY DOCKET NO. 040894-5411-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
Etsuyoshi KOBORI)	
)	
Application No.: 09/610,148)	Group Art Unit: 2814
)	
Filed: July 5, 2000)	Examiner: A. Mai
)	
For: METHOD OF FABRICATING)	
SEMICONDUCTOR DEVICE, AND)	
SEMICONDUCTOR DEVICE)	

RECEIVED
JAN 30 2002
TECHNOLOGY CENTER 2800

Commissioner for Patents
Washington, D.C. 20231

AMENDMENT TRANSMITTAL FORM

1. Transmitted herewith is an Amendment responding to the Office Action dated October 1, 2001.
2. Additional papers enclosed:
 - ☐ Drawings: ☐ Formal ☐ Informal
 - ☐ Request for Approval of Drawing Corrections
 - ☐ Form PTO-1449, ___ references included
 - ☐ Citations
 - ☐ Declaration of Biological Deposit
 - ☐ Submission of "Sequence Listing", computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

3. Extension of Time

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136(a) apply.

- ☐ Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.
- ☒ Applicant petitions for an extension of time, the fees for which are set out in 37 C.F.R. 1.17(a)-(d), for the total number of months checked below:

<u>Total Months Requested</u>	<u>Fee for Extension</u>	<u>[Fee for Small Entity]</u>
<input checked="" type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 400.00	\$200.00
<input type="checkbox"/> three months	\$ 920.00	\$460.00
<input type="checkbox"/> four months	\$1,440.00	\$720.00

Extension of time fee due with this request: \$ 110.00

If an extension of time is required, please consider this a Petition therefor.

An extension for __ months has already been secured and the fee paid therefor of \$____ is deducted from the total fee due for the total months of extension now requested.

4. Constructive Petition

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

5. Fee Calculation

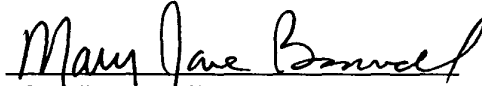
CLAIMS AS AMENDED						
	Claims Remaining After Amendment		Highest No. Previously Paid	Present Extra	at Rate of	Total Fees
Total Claims	4	minus	20	0	x \$18.00 each=	+\$ 0.00
Independent Claims	4	minus	3	1	x \$84.00 each=	+\$ 84.00
First presentation of Multiple dependent claim(s)					\$ 270.00	+\$ 0.00
SUB-TOTAL =						\$ 84.00
Reduction by ½ for filing by a small entity						- \$ 0.00
TOTAL FEE =						\$ 84.00

6. Fee Payment

- ☐ No fee is to be paid at this time.
- ☒ A check in the amount of \$194.00 representing fee for one month extension of time and fee for additional independent claims exceeding three. The Commissioner is hereby authorized to charge any additional extension of time fee or additional fee for claims due to Deposit Account No. 50-0310.
- ☒ The Commissioner is hereby authorized to charge any fees including fees due under 37 C.F.R. § 1.16 and § 1.17 which may be required, or credit any overpayment to Deposit Account 50-0310.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By: 
Mary J. Boswell
Reg. No. 33,652

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